

## ABSTRACT

In a wireless internet access system, an access point of a base station and a group of wireless modems communicate over a wireless channel. This wireless channel comprises a sequence of “dwells,” where each dwell represents a period of time, e.g., 20 milli-seconds (ms). Each dwell can convey both uplink (or upstream) and downlink (or downstream) transmissions to, and from, the group of wireless modems. However, in each dwell a particular wireless modem can only communicate half-duplex – either provide an uplink transmission to the access point, or receive a downlink transmission from the access point. The access point load balances, or distributes, the downlink transmissions to the group of wireless modems across the dwells upon detection that some dwells convey more downlink transmissions than other dwells.